



TEST REPORT

No. 2007TAF001

for

GROUP SENSE PDA LTD.

HatchBack

Type: BD00

with

Hardware Version: 30-BD06-013059

Software Version: BD06-V1.01.0019

Issued Date: 2007-01-16



No. DAT-P-114/01-01

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of TMC Beijing.

Test Laboratory:

TMC Beijing, Telecommunication Metrology Center of Ministry of Information Industry

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1. Test Laboratory

1.1. Testing Location

Company Name: TMC Beijing, Telecommunication Metrology Center of MII
Address: No 52, Huayuan beilu, Haidian District, Beijing, P.R.China
Postal Code: 100083
Telephone: 00861062303288
Fax: 00861062304793

1.2. Testing Environment

Normal Temperature: 15-35℃
Relative Humidity: 20-75%

1.3. Project data

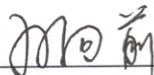
Testing Start Date: 12-26,2006
Testing End Date: 01-12,2007

1.4. Signature



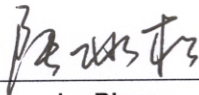
Zi Xiaogang

(Prepared this test report)



Sun Xiangqian

(Reviewed this test report)



Lu Bingsong

Deputy Director of the laboratory
(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name: GROUP SENSE PDA LTD.
Address /Post: 6th Floor, Building 9, No.5 Science Park West Avenue, Hong Kong
Science Park, Shatin
City: Hong Kong
Postal Code: /
Country: P R China
Telephone: +852 2832 8203
Fax: +852 2591 2348

2.2. Manufacturer Information

Company Name: GROUP SENSE PDA LTD.
Address /Post: 6th Floor, Building 9, No.5 Science Park West Avenue, Hong Kong
Science Park, Shatin
City: Hong Kong
Postal Code: /
Country: P R China
Telephone: +852 2832 8203
Fax: +852 2591 2348

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	HatchBack
Model	BD00

Note: Photographs of EUT are shown in ANNEX A of this test report. Components list, please refer to documents of the manufacturer; it is also included in the original test record of Telecommunication Metrology Center of MII of People's Republic of China.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	BD06-QA2-112	30-BD06-013059	BD06-V1.01.0019

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN
AE1	Battery	---
AE2	Travel Adapter	---

AE1

Model	PS-603759-10
Manufacturer	Amperex Technology Ltd.
Capacitance	/
Nominal Voltage	/

AE2

Model	S010au0500100
Manufacturer	TEN PAO
Length of DC line	184cm

*AE ID: is used to identify the test sample in the lab internally.

3.4. General Description

Equipment Under Test (EUT) is a model of GPS receiver with integrated antenna and 50 Ω antenna connector port. The antenna connector port should connect the external antenna. It has Camera and MP3 function. It consists of GPS receiver and normal options: Lithium Battery, Charger. Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the Client.

3.5. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT1+ AE1+AE2	--

4. Reference Documents

4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 15	/	10-1-05 Edition

5. LABORATORY ENVIRONMENT

Semi-anechoic chamber (23 meters×17meters×10meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Normalised site attenuation (NSA)	< ±3.2 dB, 10 m distance, from 30 to 1000 MHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 2000 MHz

Control room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. =30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

Conducted chamber did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

Fully-anechoic chamber (6.8 meters×3.08 meters×3.53 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80 to 2000 MHz

6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:

P Pass

F Fail

NA not applicable

NM not measured

See **ANNEX B** for detail.

SUMMARY OF MEASUREMENT RESULTS OF EMISSION	VERDICT			
	NA	P	F	NM
Radiated Emission 15.109(a)		P		
Conducted Emission 15.107(a)		P		

7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTUR E	CAL DUE DATE
1	Test Receiver	ESS	847151/015	R&S	2007-10-30
2	Test Receiver	ESI40	831564/002	R&S	2007-2-11
3	BiLog Antenna	3142B	9908-1403	EMCO	2007-1-16
4	BiLog Antenna	VUL9163	9163 175	Schwarzbeck	2009-9-19
5	Signal Generator	SMT06	831285/005	R&S	2006-12-26
6	Signal Generator	SMP04	100070	R&S	2007-4-20
7	LISN	ESH2-Z5	829991/012	R&S	2007-8-13
8	Spectrum Analyzer	E4440A	MY41000262	Agilent	2007-4-18
9	Dual-Ridge Waveguide Horn Antenna	3115	9906-5827	EMCO	2008-3
10	Dual-Ridge Waveguide Horn Antenna	3116	2663	EMCO	2008-3
11	Dual-Ridge Waveguide Horn Antenna	3116	2661	EMCO	2008-3
12	Climatic chamber	SH-241	92003546	ESPEC	2007-5-15
13	Spectrum Analyzer	FSU26	200030	R&S	2007-6-19
14	Bluetooth Tester	MT8852A	6K0002698	Anritsu	2009-3-19

ANNEX A: EUT photograph



Pic A-1 GPS equipment



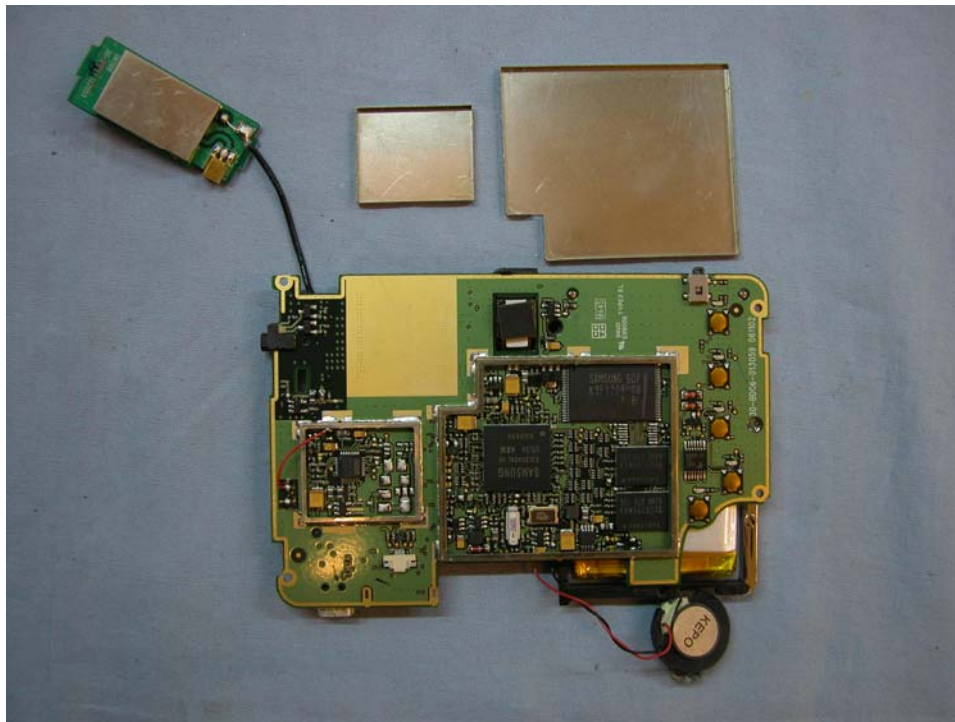
Pic A-2 GPS equipment



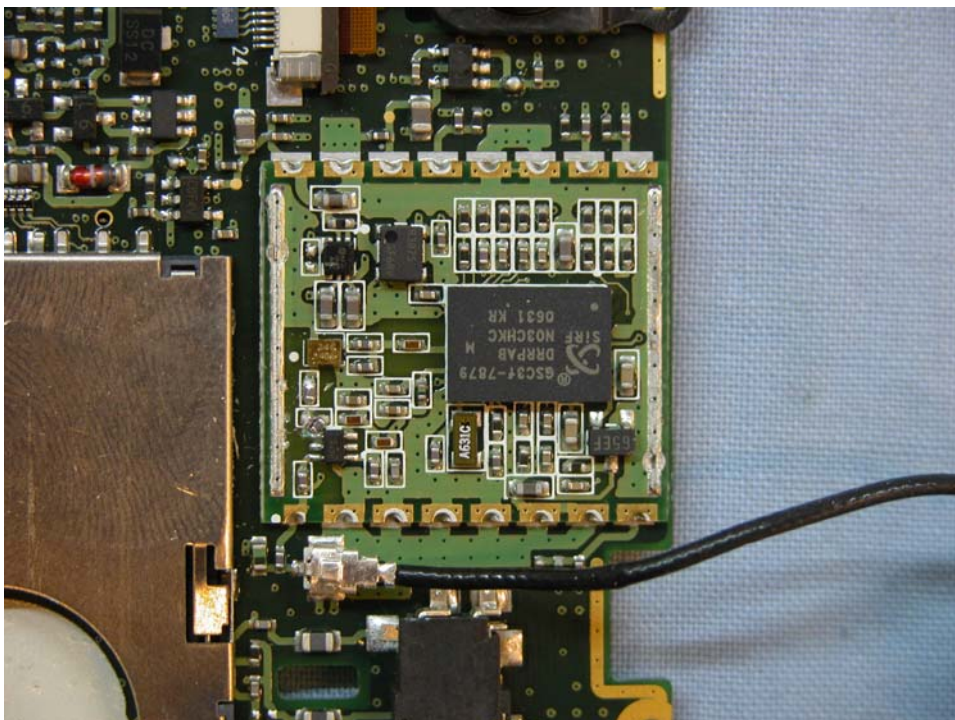
Pic A-3 GPS equipment Disassembly



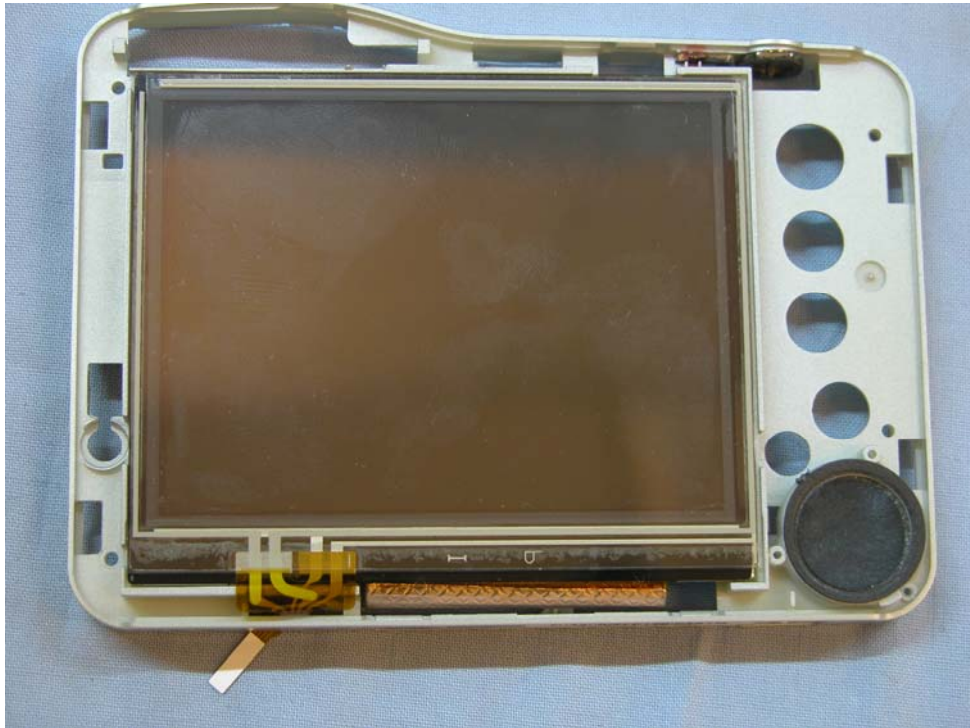
Pic A-4 GPS equipment Disassembly



Pic A-5 GPS equipment Disassembly



Pic A-6 GPS equipment Disassembly



Pic A-6 GPS equipment Disassembly



Pic A-6 GPS Charger



Pic A-6 Label of GPS Charger

ANNEX B: MEASUREMENT RESULTS

B.1 Radiated Emission (§15.109(a))

B.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator at a distance of 3 meters is tested. The test set-up please refers to Annex C Pic C-1.

B.1.2 EUT Operating Mode:

A testing link is set up with a GPS Simulator.

B.1.3 Measurement Limit

Frequency of emission (MHz)	Field strength (microvolts/meter)
30-88	100
88-216	150
216-960	200
Above 960	500

B.1.4 Measurement Results

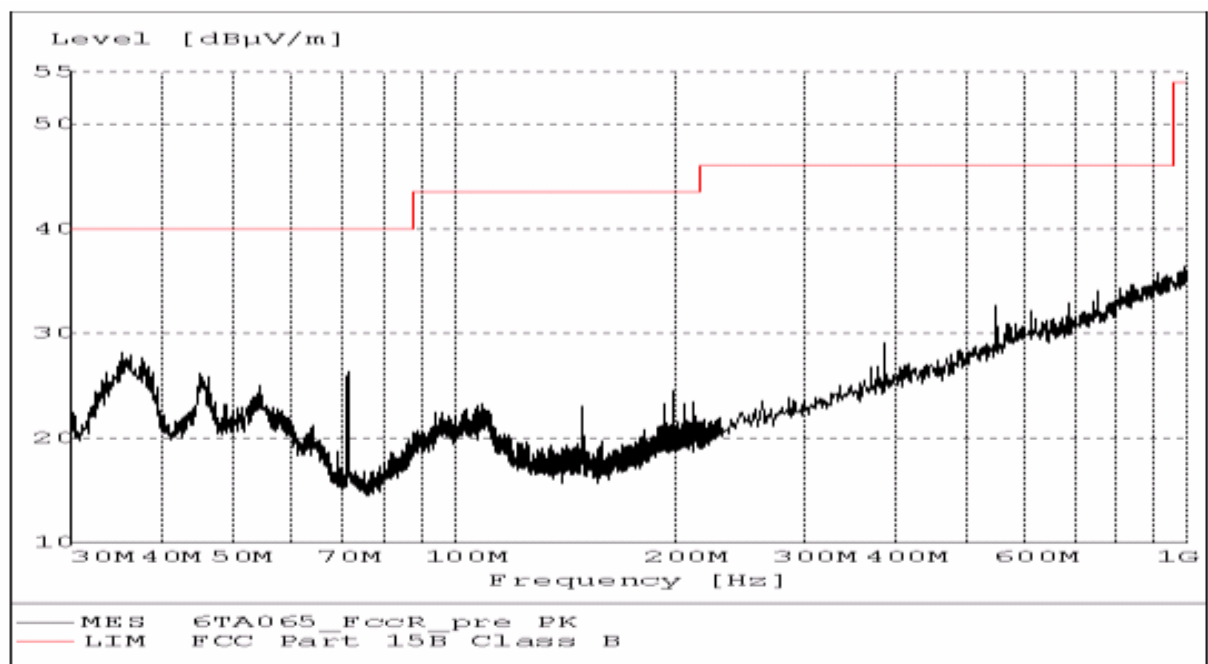


Figure B-1 Radiated Emission below 1GHz

B.2 Conducted Emission (§15.107(a))

B.2.1 Method of measurement

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150kHz to 30MHz shall not exceed the limits. The test set-up please refers to Annex C Pic C-2

B.2.2 EUT Operating Mode:

A testing link is set up with a GPS Simulator.

B.2.3 Measurement Limit

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency

B.2.4 Measurement Results

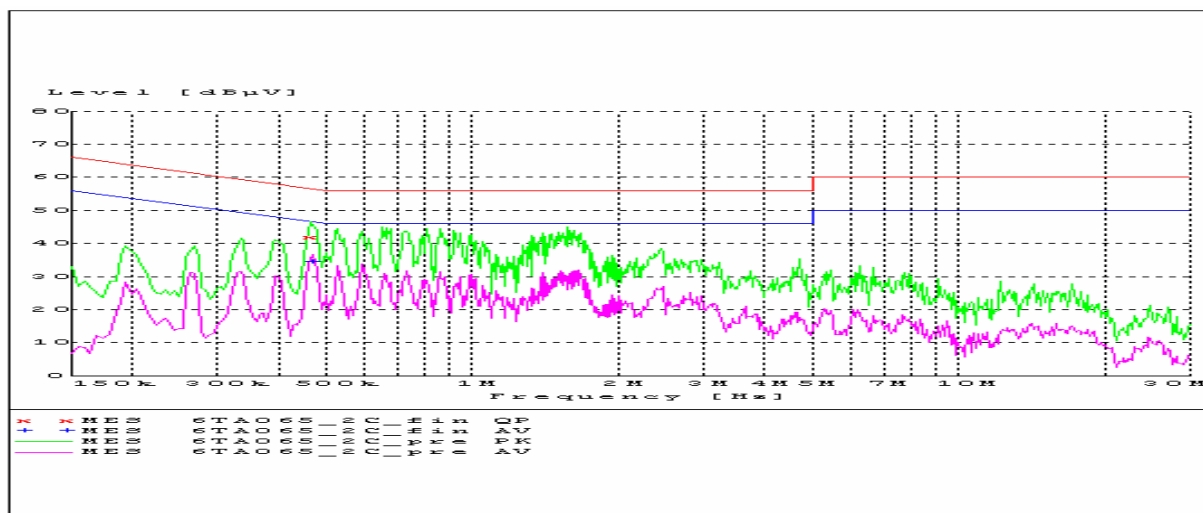


Figure B-2 Conducted Emission

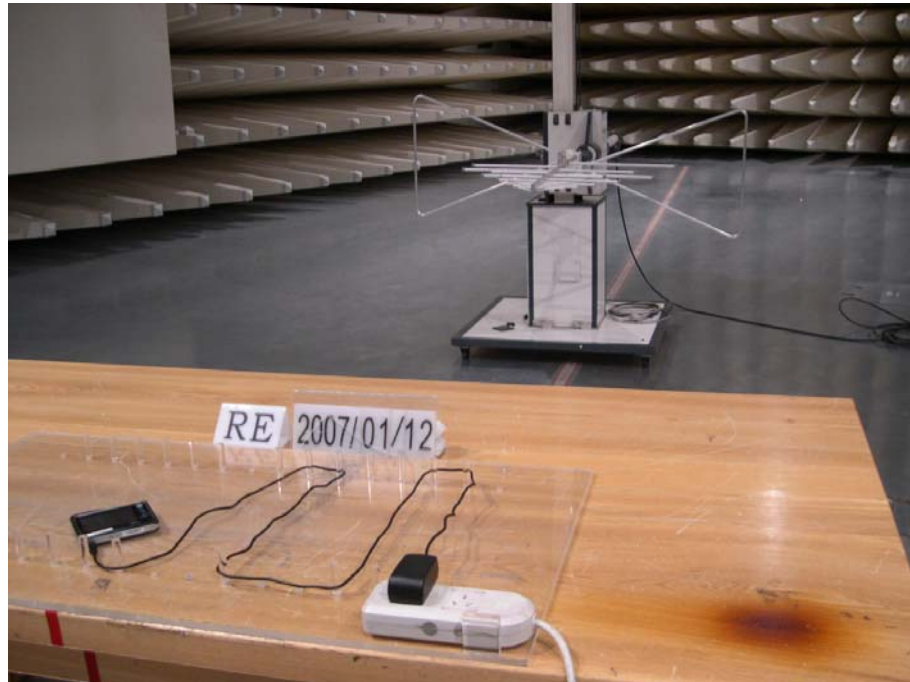
MEASUREMENT RESULT: "06TA065_2C_fin QP"

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Line	PE
0.465000	41.80	10.1	57	14.8	L1	FLO

MEASUREMENT RESULT: "06TA065_2C_fin AV"

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Line	PE
0.470000	34.20	10.1	47	12.3	L1	FLO

ANNEX C: TEST LAYOUT



Pic C-1 Radiated emission



Pic C-2 Conducted emission

*****END OF REPORT*****